

**What is claimed is:**

1. In a data communication network having a plurality of computer systems and using a plurality of communication protocols, a method for selecting the best routes for data communication comprising the following steps:
  - sending a data to and receiving the data from a platform server;
  - sending the data to and receiving the data from a platform client;
  - determining a protocol based on data characteristics; and
  - routing the data by the selected protocol to reach one or more destinations.
2. The method of data communication as claimed in claim 1, wherein the data is sent to the platform server and is received from the platform server by Dial up modem.
3. The method of data communication as claimed in claim 1, wherein the data is sent to the platform server and is received from the platform server by Internet Protocol.
4. The method of data communication as claimed in claim 1, wherein the data is sent to the platform server and is received from the platform server by Short Messaging Service (SMS).
5. The method of data communication as claimed in claim 1, wherein the data is sent to the platform server and is received from the platform server by Multimedia Messaging Service (MMS).
6. The method of data communication as claimed in claim 2, wherein the platform server further comprises:

a Hayes supported phone modem for connecting with the platform client, wherein the platform client transmits the data by dial-up modem.

7. The method of data communication as claimed in claim 2, wherein the platform server further comprises:

a Hayes supported cellular modem for connecting with the platform client, wherein the platform client transmits the data by dial-up modem.

8. The method of data communication as claimed in claim 3, wherein the platform server further comprises:

a communications link that supports the Internet Protocol for connecting with the platform client, wherein the platform client transmits the data by the Internet.

9. The method of data communication as claimed in claim 4, wherein the platform server further comprises:

a communication link which connects with Short Messaging Service (SMS) gateway for transmitting the data with the platform client.

10. The method of data communication as claimed in claim 5, wherein the platform server further comprises:

a communications link which connects with Multimedia Messaging Service (MMS) gateway for transmitting the data with the platform client.

11. The method of data communication as claimed in claim 1, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

12. The method of data communication as claimed in claim 2, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

13. The method of data communication as claimed in claim 3, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

14. The method of data communication as claimed in claim 4, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

15. The method of data communication as claimed in claim 5, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

16. The method of data communication as claimed in claim 6, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

17. The method of data communication as claimed in claim 7, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

18. The method of data communication as claimed in claim 8, wherein the determining a protocol step is based on:

- size of the data;

- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

19. The method of data communication as claimed in claim 9, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

20. The method of data communication as claimed in claim 10, wherein the determining a protocol step is based on:

- size of the data;
- maximum cellular communication link speed;
- priority of the data; and
- communication protocol.

21. The method of data communication as in claim 1, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.

22. The method of data communication as in claim 2, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.

23. The method of data communication as in claim 3, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
24. The method of data communication as in claim 4, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
25. The method of data communication as in claim 5, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
26. The method of data communication as in claim 6, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
27. The method of data communication as in claim 7, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
28. The method of data communication as in claim 8, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.

29. The method of data communication as in claim 9, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
30. The method of data communication as in claim 10, wherein the determining a protocol step further comprises a step of: if the destination is a client without a cellular communication link, the user must poll for data sending.
31. The method of data communication as claimed in claim 1, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
32. The method of data communication as claimed in claim 2, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
33. The method of data communication as claimed in claim 3, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.

34. The method of data communication as claimed in claim 4, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
35. The method of data communication as claimed in claim 5, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
36. The method of data communication as claimed in claim 6, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
37. The method of data communication as claimed in claim 7, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.



38. The method of data communication as claimed in claim 8, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
39. The method of data communication as claimed in claim 9, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
40. The method of data communication as claimed in claim 10, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is normal, then the data is sent to the client via short message service (SMS) protocol.
41. The method of data communication as claimed in claim 1, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.

42. The method of data communication as claimed in claim 2, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.
43. The method of data communication as claimed in claim 3, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.
44. The method of data communication as claimed in claim 4, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.
45. The method of data communication as claimed in claim 5, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.

46. The method of data communication as claimed in claim 6, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.
47. The method of data communication as claimed in claim 7, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.
48. The method of data communication as claimed in claim 8, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.
49. The method of data communication as claimed in claim 9, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.

50. The method of data communication as claimed in claim 10, wherein the determining a protocol step further comprises a step of: if the size of the data is smaller than 900 bytes, and the destination is a client with cellular communication link, and the priority on the message is urgent, then the data is sent to the client via modem dialup.

51. The method of data communication as claimed in claim 1, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.

52. The method of data communication as claimed in claim 2, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.

53. The method of data communication as claimed in claim 3, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.

54. The method of data communication as claimed in claim 4, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.
55. The method of data communication as claimed in claim 5, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.
56. The method of data communication as claimed in claim 6, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.
57. The method of data communication as claimed in claim 7, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.

58. The method of data communication as claimed in claim 8, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.
59. The method of data communication as claimed in claim 9, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.
60. The method of data communication as claimed in claim 10, wherein the determining a protocol step further comprises step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is less than 56Kbps, then the data is sent to the client via modem dialup.
61. The method of data communication as claimed in claim 1, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1×RTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.

62. The method of data communication as claimed in claim 2, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1×RTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.
63. The method of data communication as claimed in claim 3, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1×RTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.
64. The method of data communication as claimed in claim 4, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1×RTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.

65. The method of data communication as claimed in claim 5, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1xRTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.
66. The method of data communication as claimed in claim 6, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1xRTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.
67. The method of data communication as claimed in claim 7, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1xRTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.



68. The method of data communication as claimed in claim 8, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1xRTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.
69. The method of data communication as claimed in claim 9, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1xRTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.
70. The method of data communication as claimed in claim 10, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than 900 bytes but less than X bytes, and the destination is a client with cellular communication link, and the maximum cellular communications link speed is no less than 56Kbps, then the communication protocols is GPRS, WCDMA or CDMA 1xRTT, the data is sent to the client via modem dialup; otherwise, the user must poll for data sending.

71. The method of data communication as claimed in claim 1, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

72. The method of data communication as claimed in claim 2, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

73. The method of data communication as claimed in claim 3, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the

maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

74. The method of data communication as claimed in claim 4, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

75. The method of data communication as claimed in claim 5, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication

protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

76. The method of data communication as claimed in claim 6, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

77. The method of data communication as claimed in claim 7, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on

how the platform client can retrieve the data; otherwise, the user must poll for data sending.

78. The method of data communication as claimed in claim 8, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

79. The method of data communication as claimed in claim 9, wherein the determining a protocol step further comprises a step of: if the size of the data is larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

80. The method of data communication as claimed in claim 10, wherein the determining a protocol step further comprises a step of: if the size of the data is

larger than X bytes, and the client has a cellular communications link, and the maximum cellular communications link speed is no more than 28.8 Kbps, then data cannot be sent as the link is too slow; otherwise, when the maximum cellular communications link speed is more than 28.8 Kbps and the communication protocols is GPRS, WCDMA or CDMA 1×RTT, then an SMS notification message is sent to the client wherein the SMS message contains information on how the platform client can retrieve the data; otherwise, the user must poll for data sending.

81. The method of data communication as claimed in claim 1, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
82. The method of data communication as claimed in claim 2, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
83. The method of data communication as claimed in claim 3, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
84. The method of data communication as claimed in claim 4, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.

85. The method of data communication as claimed in claim 5, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
86. The method of data communication as claimed in claim 6, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
87. The method of data communication as claimed in claim 7, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
88. The method of data communication as claimed in claim 8, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
89. The method of data communication as claimed in claim 9, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.
90. The method of data communication as claimed in claim 10, wherein when the user receives the SMS notification message, the user can use other high-speed broadband connection to retrieve the data.

91. An apparatus for selecting the best routes and protocols for data communication, the apparatus comprising:

- a memory to store a program, and
- a processor responsive to the program to:
  - (1). send data to and receive data from a platform server;
  - (2). send data to and receive data from a platform client;
  - (3). determine the best protocol based on data characteristics; and
  - (4). route data by the selected protocol to reach one or more destinations.

92. The apparatus as claimed in claim 91, wherein the data characteristic further comprises:

- the size of the data;
- the maximum cellular communication link speed;
- the priority of the data; and
- the communication protocol.

93. The apparatus as claimed in claim 91, wherein the memory is a hard disk.